

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) A drive transmission device for transmitting drive of an actuator to a driven member, the drive transmission device comprising:
 - an input member which is driven by the actuator~~[[;]]~~, the input member having an input contact surface; and
 - an output member which transmits drive of the input member and drives the driven member~~[[;]]~~, the output member having an output contact surface;
 - wherein the drive transmission device is switchable between a first state in which the drive of the input member is transmitted to the output member and a second state in which the drive of the input member is not transmitted to the output member, and the input member contact surface and the output member contact surface are in contact with each other when the drive transmission device is in the first state and in the second state~~[[.]]~~, and
 - a contact pressure between the input contact surface and the output contact surface in the first state is larger than a contact pressure therebetween in the second state.
2. (Previously presented) The drive transmission device according to Claim 1, wherein the drive transmission device is an electromagnetic clutch for generating an electromagnetic force by supplying electricity, the electromagnetic clutch bringing the input member and the output member into contact with each other with contact pressure by the electromagnetic force corresponding to an electricity supply value in the first state.

3. (Previously presented) The drive transmission device according to Claim 1, wherein the drive transmission device is an electromagnetic clutch for generating an electromagnetic force by supplying electricity, the electromagnetic clutch bringing the input member and the output member into contact with each other with contact pressure by the electromagnetic force corresponding to an electricity supply value in the second state.
4. (Original) The drive transmission device according to Claim 1, wherein the actuator is a motor.
5. (canceled).
6. (currently amended) The drive transmission device according to Claim 51, wherein a lubricant to give slidability is applied onto the input contact surface and onto the output contact surface.
7. (Original) The drive transmission device according to Claim 6, wherein the lubricant is grease.
8. (Original) The drive transmission device according to Claim 51, wherein at least one of either the input contact surface or the output contact surface is treated with electrolytic plating or electroless plating to give slidability.

9. (Original) The drive transmission device according to Claim 8, wherein a lubricant to give slidability is applied onto the contact surface.
10. (Original) The drive transmission device according to Claim 9, wherein the lubricant is grease.
11. (currently amended) The drive transmission device according to Claim 5~~1~~, wherein an intermediate member to give slidability is provided between the input contact surface and the output contact surface.
12. (Original) The drive transmission device according to Claim 11, wherein the intermediate member is made of at least one of either Teflon or polyethylene.
13. (Currently Amended) ~~An optical apparatus~~ A zoom lens comprising
an optical member which is driven by a manual-drive member;
an actuator; and
a drive transmission device for transmitting drive of the actuator to the optical member,
wherein the drive transmission device comprises:
an input member driven by the actuator~~[[;]]~~, the input member having a an input contact surface; and
an output member which transmits drive of the input member~~[[;]]~~, the output member having an output contact surface;

wherein the drive transmission device is switchable between a first state in which the drive of the input member is transmitted to the output member and a second state in which the drive of the input member is not transmitted to the output member,

and the input ~~member~~contact surface and the output ~~member~~contact surface are in contact with each other when the drive transmission device is in the first state and in the second state~~[[.]], and~~

a contact pressure between the input contact surface and the output contact surface in the first state is larger than a contact pressure therebetween in the second state.

14. (currently amended) The ~~zoom lens optical apparatus~~ according to Claim 13, wherein the drive transmission device is an electromagnetic clutch for generating an electromagnetic force by supplying electricity, the electromagnetic clutch bringing the input member and the output member into contact with each other with contact pressure by the electromagnetic force corresponding to an electricity supplying value in the first state.

15. (currently amended) The ~~zoom lens optical apparatus~~ according to Claim 13, wherein the optical member is a zoom lens unit.

16. (currently amended) The ~~zoom lens optical apparatus~~ according to Claim 13, wherein the optical member is a focus lens unit.

17. (currently amended) The ~~zoom lens optical apparatus~~ according to Claim 13, wherein the optical member is a stop unit.

18. (currently amended) The zoom lens optical apparatus according to Claim 13, wherein the actuator is a motor.
19. (canceled).
20. (currently amended) The zoom lens optical apparatus according to Claim 13, wherein a lubricant to give slidability is applied onto the input contact surface and onto the output contact surface.
21. (currently amended) The zoom lens optical apparatus according to Claim 20, wherein the lubricant is grease.
22. (currently amended) The zoom lens optical apparatus according to Claim 13, wherein at least one of either the input contact surface or the output contact surface is treated with electrolytic plating or electroless plating to give slidability.
23. (currently amended) The zoom lens optical apparatus according to Claim 22, wherein a lubricant to give slidability is applied onto the contact surface.
24. (currently amended) The zoom lens optical apparatus according to Claim 23, wherein the lubricant is grease.

25. (currently amended) The zoom lens optical apparatus according to Claim 13, wherein an intermediate member to give slidability is provided between the input contact surface and the output contact surface.
26. (currently amended) The zoom lens optical apparatus according to Claim 25, wherein the intermediate member is made of at least one of either Teflon or polyethylene.
27. (currently amended) The zoom lens optical apparatus according to Claim 14, further comprising a controller for controlling an electricity supplying value for the electromagnetic clutch so as to vary contact pressure between the input member and the output member.
28. (currently amended) A zoom lens An optical apparatus comprising:
an optical member which is driven by a manual-drive member;
an actuator; and
a drive transmission device for transmitting drive of the actuator to the optical member,
wherein the drive transmission device comprises:
an input member driven by the actuator~~[[:]]~~, the input member having an input contact surface; and
an output member which transmits drive of the input member~~[[:]]~~, the output member having an output contact surface;
a command unit which commands the optical member to be electrically driven, the command unit outputting command information in accordance with operation of a command operating member to the actuator; and

a controller which controls the drive transmission device in accordance with the command information from the command unit;

wherein the drive transmission device is switchable between a first state in which the drive of the input member is transmitted to the output member and a second state in which the drive of the input member is not transmitted to the output member,

~~and~~ the input ~~member~~ contact surface and the output contact surface ~~member~~ are in contact with each other when the drive transmission device is in the first state and in the second state~~[.]], and~~

a contact pressure between the input contact surface and the output contact surface in the first state is larger than a contact pressure therebetween in the second state.

29. (currently amended) The zoom lens optical apparatus according to Claim 28, wherein the controller brings the drive transmission device into the first state when there is no command information from the command unit or when command information does not exceed a predetermined range, whereas the controller brings the drive transmission device into the second state when there is command information from the command unit or when command information exceeds the predetermined range.
30. (currently amended) The zoom lens optical apparatus according to Claim 28, wherein the drive transmission device is an electromagnetic clutch for generating an electromagnetic force by supplying electricity, the electromagnetic clutch bringing the input member and the output member into contact with each other with contact pressure by the electromagnetic force corresponding to an electricity supply value,

and the controller controls an electricity supply value for the clutch in accordance with command information from the command unit.

31. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 30, wherein the controller brings the electromagnetic clutch into a state of non-electricity supply when there is no command information from the command unit or when command information does not exceed a predetermined range, whereas, when there is command information from the command unit or when command information exceeds the predetermined range, the controller brings the electromagnetic clutch into a state of electricity supply and sets an electricity supply value for the electromagnetic clutch at an electricity supply value according to the command information.

32. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 28, wherein the command unit has an operating member operated for commanding the optical member to be electrically driven, and the actuator that outputs command information in accordance with operation of the operating member works at a speed corresponding to the command information that varies in accordance with an operational amount of the operating member.

33. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 28, wherein the optical member is a zoom lens unit.

34. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 28, wherein the optical member is a focus lens unit.

35. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 28, wherein the optical member is a stop unit.
36. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 28, wherein the command information is a zoom driving signal.
37. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 28, wherein the command information is a focus driving signal.
38. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 28, wherein the command information is a stop driving signal.
39. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 28, wherein the actuator is a motor.
40. (canceled).
41. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim ~~40~~28, wherein a lubricant to give slidability is applied onto the input contact surface and onto the output contact surface.
42. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 41, wherein the lubricant is grease.

43. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 4028, wherein at least one of either the input contact surface or the output contact surface is treated with electrolytic plating or electroless plating to give slidability.
44. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 43, wherein a lubricant to give slidability is applied onto the contact surface.
45. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 44, wherein the lubricant is grease.
46. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 4028, wherein an intermediate member to give slidability is provided between the input contact surface and the output contact surface.
47. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 46, wherein the intermediate member is made of at least one of either Teflon or polyethylene.
48. (currently amended) The zoom lens ~~optical apparatus~~ according to Claim 30, wherein the controller controls an electricity ,supply value for the electromagnetic clutch so as to satisfy the relation:

$$T_k' < T_d' < T_m$$

where T_m is a maximum driving torque occurring at the input member driven by the actuator; T_k' is driving-torque needed to drive the output member that drives the optical member through the manual-drive member, and T_d' is engagement torque corresponding to contact pressure between the input member and the output member.

49. (currently amended) The zoom lens drive transmission device according to Claim 48, wherein the controller controls an electricity value for the electromagnetic clutch so as to satisfy the relation:

$$Td' < Tsy'$$

where Tsy' is manual driving torque transmitted from the manual-drive member to the output member through manual operation when the optical member is electrically driven by the actuator, thereby allowing the optical member to be manually driven while being electrically driven.

50. (currently amended) The zoom lens optical apparatus according to Claim 30, wherein, when the optical member is not electrically but manually driven, the controller controls an electricity supply value for the electromagnetic clutch so as to satisfy the relation:

$$0 \leq Td'' < Tk'$$

where Tk' is driving torque needed to drive the output member that drives the optical member through the manual-drive member while being electrically driven, and Td'' is engagement torque corresponding to contact pressure between the input member and the output member when manually driven.

51. (currently amended) The zoom lens optical apparatus according to Claim 50, wherein the controller controls an electricity supply value for the electromagnetic clutch so as to satisfy the relation:

$$0 < Td'' < Tk'$$

52. (currently amended) The zoom lens optical apparatus according to Claim 30, further comprising an adjusting member operated to vary engagement torque of the electromagnetic clutch, wherein the controller controls an electricity supply value for the electromagnetic clutch in accordance with operation of the adjusting member and varies the engagement torque when the optical member is manually operated.
53. (currently amended) The zoom lens optical apparatus according to Claim 30, wherein the controller controls an electricity supply value for the electromagnetic clutch in accordance with operation of the manual-drive member by a user.
54. (currently amended) A camera system ~~An optical apparatus~~ comprising:
an optical member which is driven by a manual-drive member;
a zoom lens an optical unit which supports has the optical member;
a camera system an imaging unit to which the optical unit zoom lens is
detachably mounted, the ~~imaging unit~~ camera having an image pickup device which
picks up an object image from the zoom lens optical unit;
an actuator; and
a drive transmission device for transmitting drive of the actuator to the optical
member;
wherein the drive transmission device comprises:
an input member driven by the actuator~~[[;]],~~ the input member having an input
contact surface;
an output member which transmits drive of the input member~~[[;]],~~ the output
member having an output contact surface;

a command unit which commands the optical member to be electrically driven, the command unit outputting command information in accordance with operation of a command operating member to the actuator; and

a controller which controls the drive transmission device in accordance with the, command information from the command unit;

wherein the drive transmission device is switchable between a first state in which the drive of the input member is transmitted to the output member and a second state in which the drive of the input member is not transmitted to the output member,

and the input ~~member~~ contact surface and the output ~~member~~ contact surface are in contact with each other when the drive transmission device is in the first state and in the second state~~[[.]], and~~

a contact pressure between the input contact surface and the output contact surface in the first state is larger than a contact pressure therebetween in the second state.

55. (currently amended) An optical-apparatus driving unit mounted or connected to a body of an optical apparatus including ~~an optical member~~ a zoom lens and a manual-operating member which manually drives the ~~optical member~~ zoom lens, the optical-apparatus driving unit comprising:

an actuator; and

a drive transmission device for transmitting drive of the actuator to the optical member,

wherein the drive transmission device comprises:

an input member driven by the actuator~~[[;]]~~ the input member having an input contact surface

an output member which transmits drive of the input member~~[[.]]~~, the output member having an output contact surface;

a command unit which commands the optical member to be electrically driven, the command unit outputting command information in accordance with operation of a command operating member to the actuator; and

a controller which controls the drive transmission device in accordance with the command information from the command unit;

wherein the drive transmission device is switchable between a first state in which the drive of the input member is transmitted to the output member and a second state in which the drive of the input member is not transmitted to the output member,

~~and the input member~~contact surface and the output ~~member~~contact surface are ~~[[In]]~~ in contact with each other when the drive transmission device is in the first state and in the second state~~[[.]]~~, and

a contact pressure between the input contact surface and the output contact surface in the first state is larger than a contact pressure therebetween in the second state.